

# FABRIC-SHIELD™ WIDE-WELD FABRIC STORM PANELS

FRANK BENNARDO, P.E.  
PE# 96064 CA# F-11383

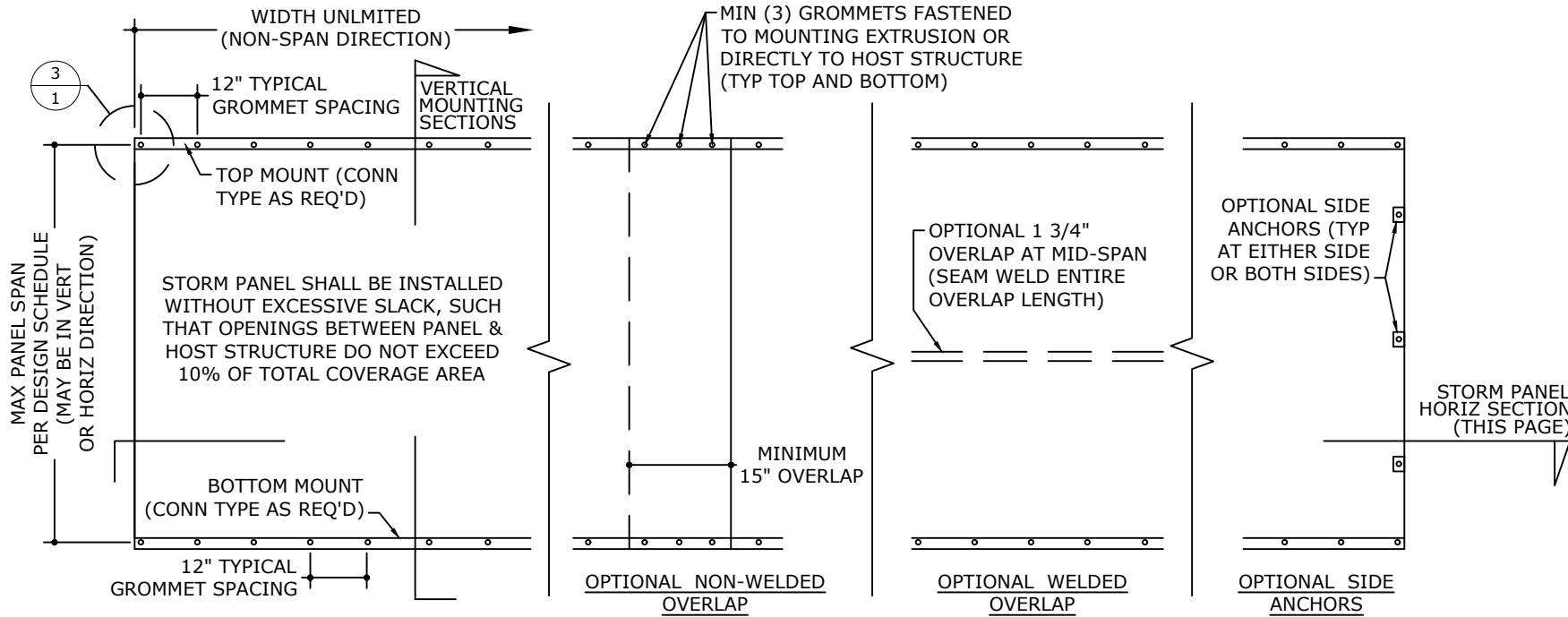
## GENERAL PERFORMANCE EVALUATION - TO BE USED BY A DESIGN PROFESSIONAL FOR SITE-SPECIFIC APPLICATIONS

VISIT [ECALC.IO/51543](http://ECALC.IO/51543)

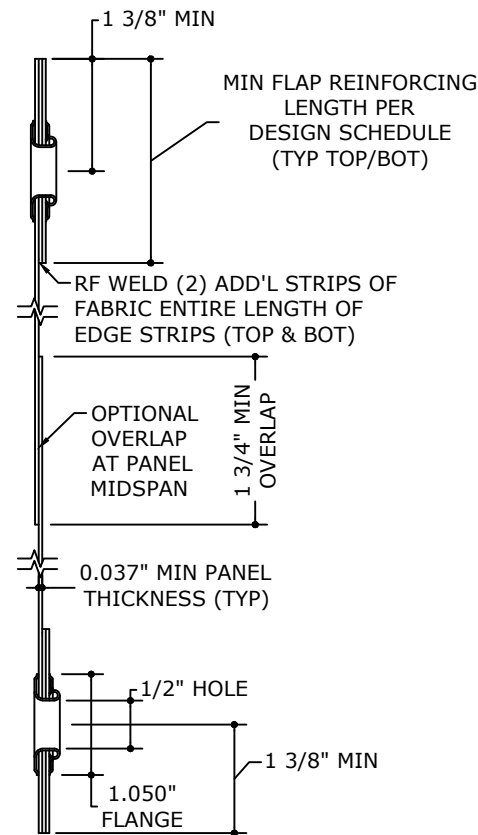
FOR SITE SPECIFIC DEVIATIONS  
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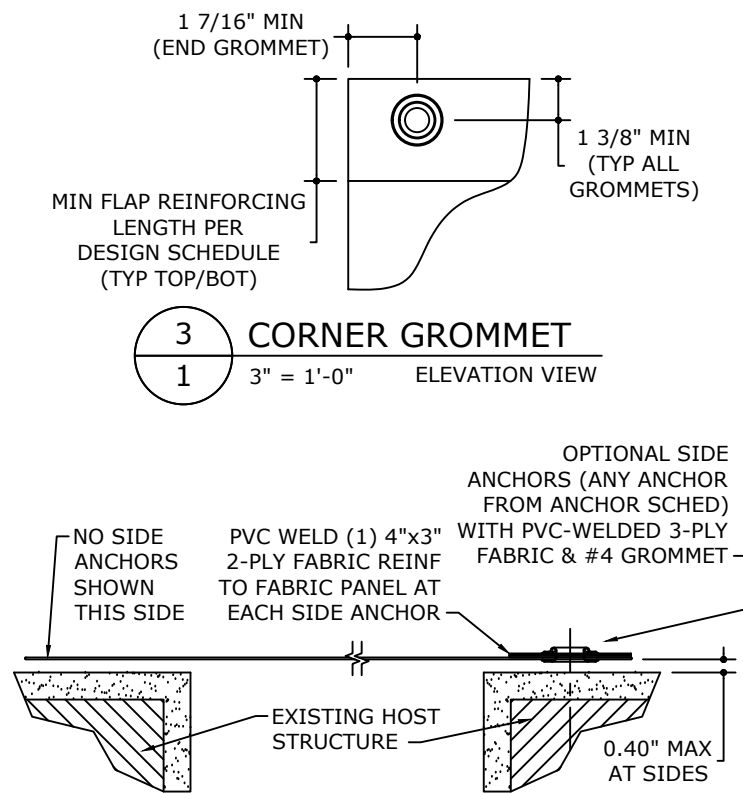
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AS LISTED ON STAMP



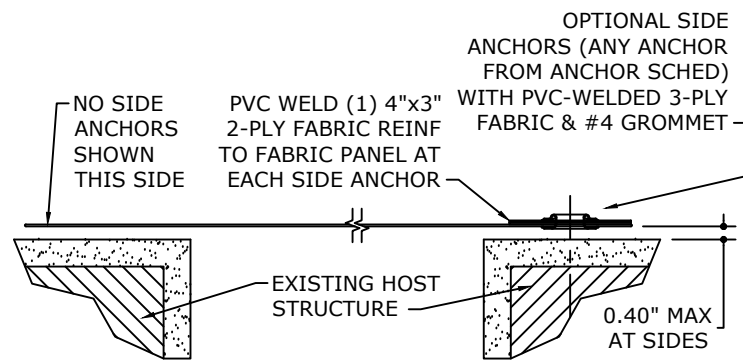
**1** TYPICAL VERTICAL MOUNT  
1 NOT TO SCALE ELEVATION VIEW



**2** PANEL PROFILE  
1 6\"/>



**3** CORNER GROMMET  
1 3\"/>



**4** HORIZONTAL SECTION  
1 NOT TO SCALE HORIZ SECTION

### DESIGN SCHEDULE:

MAX ALLOWABLE SPAN	MIN FLAP REINFORCING LENGTH	ALLOWABLE PRESSURES				DESIGN LOADS	
		DIRECT MOUNT	TRACK MOUNT	TENSION	SHEAR		
108"	2-1/8"	+62 PSF	-66 PSF	+62 PSF	-60 PSF	308 LB/FT	627 LB/FT
76-1/4"	6-3/8"	+96 PSF	-96 PSF	-	-	305 LB/FT	479 LB/FT
61"	6-3/8"	+119 PSF	-119 PSF	-	-	302 LB/FT	407 LB/FT
39"	6-3/8"	+128 PSF	-128 PSF	-	-	209 LB/FT	418 LB/FT

NOTE: 9.25" MINIMUM ALLOWABLE WIDTH (NON-SPAN DIMENSION)  
9.25" MINIMUM ALLOWABLE SPAN

### SPAN NOTES:

1. ALLOWABLE PRESSURES SHALL NOT BE EXCEEDED.
2. PANEL SPANS LONGER THAN MAXIMUM NOTED ABOVE ARE NOT ACCEPTABLE.
3. PANEL SPANS LESS THAN MINIMUM NOTED ABOVE ARE NOT ACCEPTABLE.
4. SEE BELOW NOTES FOR GLASS SEPARATION REQUIREMENTS.
5. VALID FOR PANELS MOUNTED VERTICALLY OR HORIZONTALLY.

### GLASS SEPARATION SCHEDULE NOTES:

1. GLASS SEPARATION SCHEDULE PROVIDES MINIMUM SEPARATION DISTANCE REQUIRED BETWEEN EXTERIOR FACE OF GLAZING (OR OTHER PRODUCT BEING PROTECTED) AND INTERIOR FACE OF INSTALLED STORM PANEL.
2. FOR BASIC PROTECTION, GLASS SEPARATION IS NOT REQUIRED.
3. STORM PANELS MAY BE USED IN ESSENTIAL FACILITIES AT HEIGHTS ABOVE 30 FEET FROM GRADE IN WIND ZONE 3 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.
4. STORM PANELS MAY BE USED IN ESSENTIAL FACILITIES AT ANY HEIGHT IN WIND ZONE 2 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.
5. SEPARATION FROM GLAZING IS REQUIRED FOR ALL INSTALLATIONS THAT ARE REQUIRED TO MAINTAIN A MINIMUM SEPARATION BETWEEN THE STORM PANEL AND ANY GLAZING, AS REQUIRED BY THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION.
6. LINEAR INTERPOLATION BETWEEN STORM PANEL SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE SEPARATION FROM GLASS FOR THE NEXT HIGHER SPAN SHALL BE USED.

### GLASS SEPARATION SCHEDULE:

SPANS UP TO	MINIMUM GLASS SEPARATION	
	INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE
108"	21.0"	6.5"
76-1/4"	11.1"	3.1"
61"	11.1"	2.1"
39"	8.1"	1.2"

### GENERAL NOTES:

1. THIS STORM PANEL SYSTEM HAS BEEN TESTED AND EVALUATED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION AND THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2018 EDITION FOR USE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF INSURANCE (TDI) REQUIREMENTS, PER ASTM E330, E1886, & E1996 STANDARDS. SEE PRODUCT APPROVAL EVALUATION FOR ADDITIONAL INFORMATION.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7 AND CHAPTER 16 OF THE IBC OR CHAPTER 3 OF THE IRC (AS APPLICABLE) SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. THE SHUTTER SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS TO BE USED IN CONJUNCTION WITH THIS DOCUMENT.
6. THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS IS OUTSIDE THE SCOPE OF THIS CERTIFICATION AND SHALL BE VERIFIED BY OTHERS.
7. STORM PANELS SHALL BE PVC COATED WOVEN POLYESTER FABRIC (THICKNESS t=0.037") WITH A MIN. Fu=16.053 KSI.
8. EACH STORM PANEL ASSEMBLY SHALL BEAR A PERMANENT LABEL IN ACCORDANCE WITH SECTIONS 1703.5.3 & 1703.5.4 OF IBC 2018 AS WELL AS ANY LOCAL PROVISIONS (IF APPLICABLE), AND SHALL PROVIDE THE REQUIRED PRODUCT INFORMATION AS DEFINED BY TDI, TYP.
9. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE (i.e. WITH LINE OF ANCHORAGE IN VERTICAL DIRECTION).
10. PANELS MAY BE INSTALLED WITH OPTIONAL SIDE ANCHORS AS DEPICTED HEREIN, HOWEVER SYSTEM PERFORMANCE IS BASED ON TESTING WITHOUT SIDE ANCHORS. TESTS SHOW A FAILURE LOAD OF 987 LBS FOR THE #4 GROMMET AND 4"x3" 3-PLY PVC-WELDED FABRIC CONSTRUCTION AT EACH SIDE ANCHOR (ANCHOR NOT CONSIDERED).
11. ALL BOLTS & WASHERS SHALL BE ZINC COATED, GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI.
12. ALL ACCEPTANCE CRITERIA HAVE BEEN MET FOR THIS SHUTTER AS A NON-POROUS SYSTEM, AS DEFINED IN ASTM E1996. IN KEEPING WITH THIS STANDARD WHEN INSTALLED OUTSIDE OF ASTM WIND ZONE 4 AND ESSENTIAL FACILITIES, NO MINIMUM SEPARATION FROM THE GLAZING BEING PROTECTED IS REQUIRED, AND BREAKING OF THIS GLAZING DOES NOT COMPROMISE THE BUILDING ENVELOPE.
13. ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE ONLY PERMITTED TO SHOW SITE-SPECIFIC CONDITIONS, HOWEVER ANY CHANGES, ALTERATIONS OR ADDITIONS MADE TO THE CONTENT OF THIS DOCUMENT WILL INVALIDATE THIS CERTIFICATION.

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A DIVISION OF OVERHEAD DOOR CORP.  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
FABRIC-SHIELD™ WIDE-WELD FABRIC STORM PANELS  
IBC 2018 EDITION & IRC 2018 EDITION  
TEXAS DEPARTMENT OF INSURANCE (TDI)

**Wayne Dalton**

REMARKS	DATE	DRWN	CHKD
INIT ISSUE (SHU-140)	12/10/09	KL	FLB
DRAWING NO. 04-WDF-004	12/10/09	KL	FLB
REV. TO 2018 IBC/IRC	05/05/22	EPR	RWN

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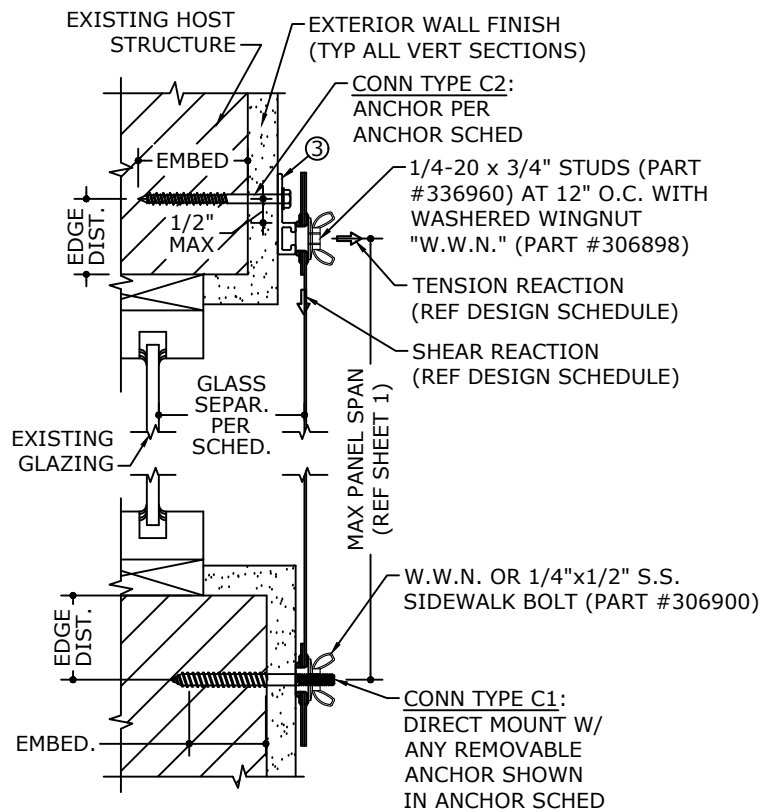
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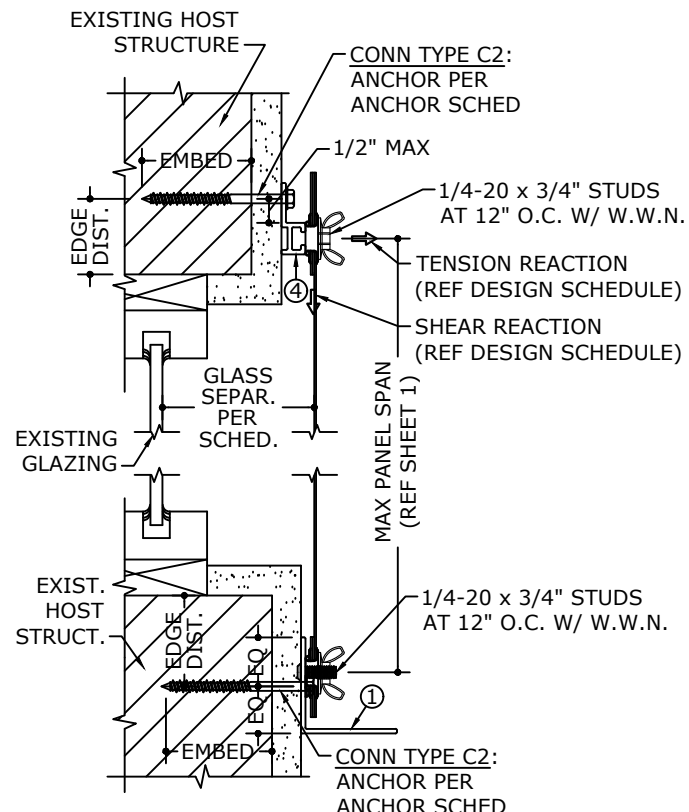
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c:\users\eric\engineering\express\production - documents\projects\22-51543 fabric-shield wide-weld fabric storm panels, impact resistant - shu 14\work\drawings & cad\1 tdi-22-51543f.dwg.dwg

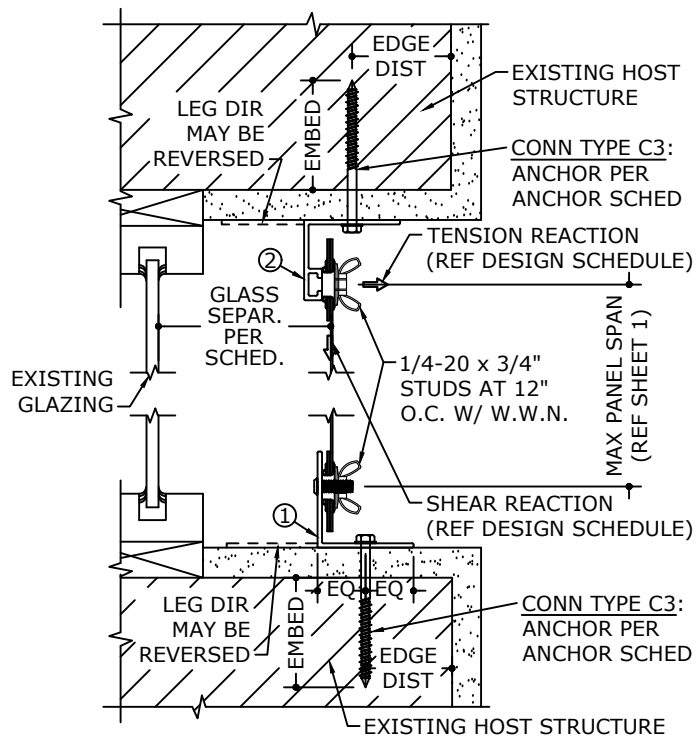
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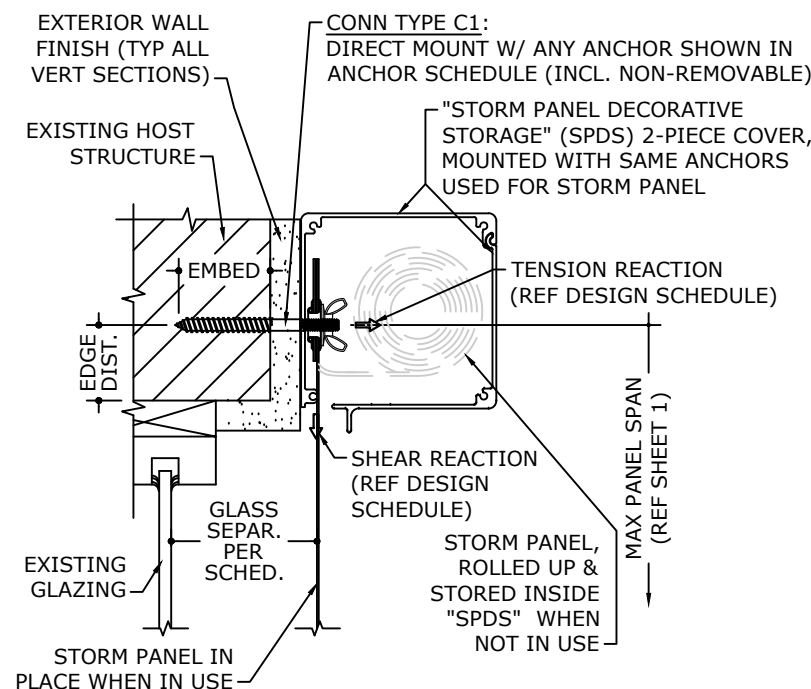
**1 MOUNTING SECTION**  
2 3" = 1'-0" VERT SECTION



**2 MOUNTING SECTION**  
2 3" = 1'-0" VERT SECTION



**3 MOUNTING SECTION**  
2 3" = 1'-0" VERT SECTION



**"SPDS" SECTION (OPTIONAL)**  
2 3" = 1'-0" VERT SECTION

**ANCHOR NOTES**

- 1/4" TAPCONS SHALL BE BY ITW, ULTRACONS SHALL BE BY DEWALT, AS LISTED IN APPROPRIATE ANCHOR SCHEDULE. "DEWALT PANELMATE" ANCHORS MAY BE MALE OR FEMALE ONLY, AS ILLUSTRATED.
- ENSURE MINIMUM EDGE DISTANCE FOR ALL ANCHORS PER RESPECTIVE ANCHOR SCHEDULE. EDGE DISTANCE OF 3/4" IS ACCEPTABLE FOR ANCHORS TO WOOD, EXCEPT FOR 5/16" AND 3/8" HANGER BOLTS. REFERENCE ANCHOR SCHEDULE FOR MINIMUM EDGE DISTANCE REQUIREMENTS FOR THESE ANCHORS.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- ALL CONCRETE ANCHORS SPECIFIED HEREIN SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT ANCHORS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
- ANCHORS FASTENED TO NARROW FACE OF STUD FRAMING SHALL BE LOCATED IN CENTER OF NOMINAL 2x4 (MIN) WOOD STUD (i.e. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING). WOOD STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55, "SPRUCE-PINE-FIR" G=0.42, OR GREATER DENSITY.
- ANCHOR SCHEDULE APPLIES FOR ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED IN SPAN SCHEDULE SHALL APPLY.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE A PAN HEAD, TRUSS HEAD, OR WAFER HEAD ("SIDEWALK BOLT") U.N.O.
- /// DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.
- \* DESIGNATES ANCHORS WHICH ARE REMOVABLE AND MAY BE USED FOR DIRECT MOUNT INSTALLATIONS.

**ANCHOR SCHEDULE 1**

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE (UNLESS OTHERWISE NOTED)												
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"						
			C1	C2	C3	C1	C2	C3	C1	C2	C3				
WOOD (G=0.55)	1/4" LAG SCREW WITH MIN 2-3/32" THREAD PENETR.	38	10"	10"	3"	7"	7"	///	4"	4"	///	///	///	///	///
		47	8"	8"	3"	5"	5"	///	4"	4"	///	///	///	///	///
		66	6"	6"	///	4"	4"	///	3"	3"	///	///	///	///	///
		96	4"	4"	///	3"	3"	///	3"	3"	///	///	///	///	///
		128	4"	4"	///	3"	3"	///	3"	3"	///	///	///	///	///
		38	9"	9"	4"	6"	6"	3"	4"	4"	///	///	///	///	///
		47	7"	7"	3"	5"	5"	///	3"	3"	///	///	///	///	///
		66	5"	5"	///	4"	4"	///	3"	3"	///	///	///	///	///
		96	4"	4"	///	3"	3"	///	3"	3"	///	///	///	///	///
		128	3"	3"	///	3"	3"	///	3"	3"	///	///	///	///	///
		38	12"	12"	12"	11"	11"	12"	7"	7"	10"	///	///	///	///
		47	12"	12"	12"	9"	9"	12"	6"	6"	7"	///	///	///	///
	66	9"	9"	12"	6"	6"	8"	4"	4"	4"	///	///	///	///	
	96	8"	8"	9"	5"	5"	4"	4"	4"	4"	///	///	///	///	
	128	6"	6"	7"	5"	5"	4"	///	///	///	///	///	///	///	
	38	12"	12"	12"	12"	12"	12"	8"	8"	8"	///	///	///	///	
	47	12"	12"	12"	10"	10"	10"	7"	7"	6"	///	///	///	///	
	66	11"	11"	11"	7"	7"	7"	5"	5"	4"	///	///	///	///	
	96	10"	10"	8"	6"	6"	4"	5"	5"	4"	///	///	///	///	
	128	7"	7"	6"	6"	6"	4"	///	///	///	///	///	///	///	
	38	12"	12"	12"	12"	12"	12"	10"	10"	9"	///	///	///	///	
	47	12"	12"	12"	12"	12"	11"	8"	8"	7"	///	///	///	///	
	66	12"	12"	11"	8"	8"	8"	6"	6"	4"	///	///	///	///	
	96	11"	11"	9"	7"	7"	5"	6"	6"	4"	///	///	///	///	
	128	8"	8"	7"	7"	7"	5"	///	///	///	///	///	///	///	
	38	10"	10"	3"	7"	7"	///	4"	4"	///	///	///	///	///	
	47	8"	8"	3"	5"	5"	///	4"	4"	///	///	///	///	///	
	66	6"	6"	///	4"	4"	///	3"	3"	///	///	///	///	///	
	96	4"	4"	///	3"	3"	///	3"	3"	///	///	///	///	///	
	128	4"	4"	///	3"	3"	///	3"	3"	///	///	///	///	///	
	38	12"	12"	12"	12"	12"	12"	11"	11"	10"	///	///	///	///	
	47	12"	12"	12"	12"	12"	12"	9"	9"	8"	///	///	///	///	
	66	12"	12"	12"	9"	9"	9"	6"	6"	5"	///	///	///	///	
	96	12"	12"	10"	8"	8"	5"	6"	6"	5"	///	///	///	///	
	128	9"	9"	8"	8"	8"	5"	///	///	///	///	///	///	///	
	38	12"	12"	12"	12"	12"	12"	10"	10"	12"	///	///	///	///	
	47	12"	12"	12"	12"	12"	12"	8"	8"	9"	///	///	///	///	
	66	12"	12"	12"	9"	9"	10"	6"	6"	5"	///	///	///	///	
	96	12"	12"	11"	8"	8"	6"	6"	6"	5"	///	///	///	///	
	128	9"	9"	9"	8"	8"	6"	///	///	///	///	///	///	///	

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IBC 2018 EDITION & IRC 2018 EDITION  
TEXAS DEPARTMENT OF INSURANCE (TDI)

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (SHU-140)	KL	FLB	12/10/09
DRAWING NO. 04-WDF-004	KL	FLB	12/10/09
REV. TO 2018 IBC/IRC	EPR	RWN	05/05/22

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**ANCHOR SCHEDULE 2**

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE											
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"					
			C1	C2	C3	C1	C2	C3	C1	C2	C3			
WOOD (G=0.42)	1/4" LAG SCREW WITH MIN 2-3/32" THREAD PENETR.	38	9"	9"	3"	6"	6"	3"	4"	4"	3"	3"	3"	3"
		47	7"	7"	3"	5"	5"	3"	3"	3"	3"	3"	3"	3"
	66	5"	5"	3"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"
	96	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	128	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	1/4" TAPCON (DEWALT OR S.S. ITW) OR 1/4" DEWALT CRETE-FLEX OR #14 WOOD SCREW WITH 1-1/2" MIN THREAD PEN.	38	8"	8"	3"	5"	5"	3"	4"	4"	3"	3"	3"	3"
		47	6"	6"	3"	4"	4"	3"	3"	3"	3"	3"	3"	3"
	66	5"	5"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	96	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	128	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	1/4" ITW TAPCON SG WITH 1-1/2" MIN EMBED	38	11"	11"	12"	7"	7"	10"	5"	5"	6"	6"	6"	6"
		47	9"	9"	12"	6"	6"	8"	4"	4"	5"	5"	5"	5"
	66	6"	6"	8"	4"	4"	5"	3"	3"	3"	3"	3"	3"	3"
	96	5"	5"	6"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"
	128	4"	4"	5"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"
	3/16" ITW SAMMY SUPER SCREW WITH 1-1/2" MIN EMBED	38	12"	12"	12"	8"	8"	8"	6"	6"	5"	5"	5"	5"
		47	10"	10"	10"	7"	7"	7"	5"	5"	4"	4"	4"	4"
	66	7"	7"	7"	5"	5"	5"	3"	3"	3"	3"	3"	3"	3"
96	6"	6"	5"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	
128	5"	5"	4"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	
1/4" DEWALT PANELMATE (MALE OR FEMALE) WITH 1-7/8" MIN EMBED	38	12"	12"	12"	9"	9"	9"	6"	6"	6"	6"	6"	6"	
	47	11"	11"	11"	8"	8"	7"	5"	5"	4"	4"	4"	4"	
66	8"	8"	8"	5"	5"	5"	4"	4"	4"	4"	4"	4"	4"	
96	7"	7"	6"	5"	5"	3"	4"	4"	4"	4"	4"	4"	4"	
128	5"	5"	5"	5"	5"	3"	4"	4"	4"	4"	4"	4"	4"	
1/4" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D.	38	9"	9"	3"	6"	6"	3"	4"	4"	3"	3"	3"	3"	
	47	7"	7"	3"	5"	5"	3"	3"	3"	3"	3"	3"	3"	
66	5"	5"	3"	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	
96	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	
128	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	
5/16" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D.	38	12"	12"	12"	12"	12"	11"	8"	8"	7"	7"	7"	7"	
	47	12"	12"	12"	10"	10"	9"	7"	7"	6"	6"	6"	6"	
66	11"	11"	9"	7"	7"	6"	5"	5"	5"	3"	3"	3"	3"	
96	9"	9"	7"	6"	6"	4"	5"	5"	5"	3"	3"	3"	3"	
128	7"	7"	6"	6"	6"	4"	5"	5"	5"	3"	3"	3"	3"	
3/8" HANGER BOLT (MALE) W/ 3" MIN EMBED & 1 1/2" E.D.	38	12"	12"	12"	12"	12"	12"	9"	9"	9"	9"	9"	9"	
	47	12"	12"	12"	10"	10"	11"	7"	7"	7"	7"	7"	7"	
66	11"	11"	11"	7"	7"	7"	5"	5"	5"	4"	4"	4"	4"	
96	10"	10"	8"	6"	6"	4"	5"	5"	5"	4"	4"	4"	4"	
128	7"	7"	7"	6"	6"	4"	5"	5"	5"	4"	4"	4"	4"	

**ANCHOR SCHEDULE 3**

HOST STRUCT.	ANCHOR	LOAD (psf)	2" MIN EDGE DISTANCE									2-1/2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3
CONCRETE	1/4" TAPCON (ITW) WITH 1-3/4" EMBED (3192 psi MIN CONC)	38	12"	12"	12"	12"	12"	11"	10"	10"	7"	12"	12"	12"	12"	12"	11"	12"	12"	8"
		47	12"	12"	12"	12"	12"	9"	8"	8"	6"	12"	12"	12"	12"	12"	10"	10"	10"	6"
	66	12"	12"	10"	8"	8"	6"	5"	5"	4"	12"	12"	10"	10"	10"	7"	7"	7"	4"	
	96	11"	11"	7"	7"	7"	4"	5"	5"	4"	12"	12"	8"	9"	9"	5"	7"	7"	4"	
	128	8"	8"	6"	7"	7"	4"	5"	5"	4"	10"	10"	6"	9"	9"	5"	7"	7"	4"	
	1/4" ULTRACON (DEWALT) WITH 1-3/4" EMBED (2846 psi MIN CONC)	38	12"	12"	12"	12"	12"	11"	12"	12"	7"	12"	12"	12"	12"	11"	12"	12"	7"	
		47	12"	12"	12"	12"	12"	9"	9"	9"	6"	12"	12"	12"	12"	9"	11"	11"	6"	
	66	12"	12"	9"	10"	10"	6"	7"	7"	4"	12"	12"	9"	12"	12"	6"	8"	8"	4"	
	96	12"	12"	7"	8"	8"	4"	7"	7"	4"	12"	12"	7"	10"	10"	4"	8"	8"	4"	
	128	9"	9"	6"	8"	8"	4"	7"	7"	4"	11"	11"	6"	10"	10"	4"	8"	8"	4"	
	1/4" DEWALT PANELMATE WITH 2" EMBEDMENT (MIN 3350psi CONC)	38	12"	12"	12"	12"	12"	12"	12"	9"	12"	12"	12"	12"	12"	9"				
		47	12"	12"	12"	12"	12"	11"	10"	10"	7"	12"	12"	12"	12"	10"	10"	10"	6"	
	66	12"	12"	11"	11"	11"	7"	7"	7"	4"	12"	12"	10"	11"	11"	7"	8"	8"	4"	
	96	12"	12"	9"	9"	9"	5"	7"	7"	4"	12"	12"	8"	9"	9"	5"	8"	8"	4"	
	128	11"	11"	7"	9"	9"	5"	7"	7"	4"	10"	10"	6"	9"	9"	5"	8"	8"	4"	
	1/4-20 ALL POINTS SOLID-SET ANCHOR W/ 7/8" EMBED (MIN 3000psi CONC)	38	12"	12"	12"	12"	12"	10"	12"	12"	7"	12"	12"	12"	12"	11"	12"	12"	7"	
		47	12"	12"	12"	12"	12"	8"	10"	10"	5"	12"	12"	12"	12"	9"	12"	12"	6"	
	66	12"	12"	8"	11"	11"	6"	7"	7"	3"	12"	12"	10"	12"	12"	6"	9"	9"	4"	
	96	12"	12"	6"	9"	9"	4"	7"	7"	3"	12"	12"	7"	10"	10"	5"	9"	9"	4"	
	128	10"	10"	5"	9"	9"	4"	7"	7"	3"	12"	12"	6"	10"	10"	5"	9"	9"	4"	
	1/4-20 DEWALT CALK-IN WITH 7/8" EMBEDMENT (MIN 3000psi CONC)	38	12"	12"	9"	8"	6"	6"	6"	4"	12"	12"	10"	12"	12"	7"	8"	8"	5"	
	47	10"	10"	7"	7"	7"	5"	4"	4"	3"	12"	12"	8"	10"	10"	6"	6"	4"		
66	7"	7"	5"	5"	5"	3"	3"	3"	3"	3"	12"	12"	6"	7"	7"	4"	5"	3"		
96	6"	6"	4"	4"	4"	3"	3"	3"	3"	3"	12"	12"	4"	6"	6"	3"	5"	3"		
128	5"	5"	3"	4"	4"	3"	3"	3"	3"	3"	12"	12"	3"	6"	6"	3"	5"	3"		
1/4" ITW TAPCON SG OR SAMMY SUPER SCREW W/ MIN 1 3/4" EMBEDMENT (MIN 3295psi CONC)	38	12"	12"	12"	12"	12"	9"	9"	6"	12"	12"	12"	12"	11"	10"	10"	7"			
	47	12"	12"	10"	11"	11"	7"	7"	4"	12"	12"	12"	12"	9"	8"	8"	6"			
66	12"	12"	7"	8"	8"	5"	5"	5"	3"	12"	12"	10"	9"	9"	6"	6"	4"			
96	10"	10"	6"	7"	7"	3"	5"	5"	3"	12"	12"	7"	7"	7"	4"	6"	6"	4"		
128	7"	7"	5"	7"	7"	3"	5"	5"	3"	12"	12"	6"	7"	7"	4"	6"	6"	4"		
1/4" - DEWALT CRETE-FLEX W/ 2" EMBED (MIN 3350psi CONC)	38	12"	12"	12"	12"	12"	12"	12"	8"	12"	12"	12"	12"	12"	12"	12"	8"			
	47	12"	12"	12"	12"	12"	10"	11"	11"	6"	12"	12"	12"	12"	10"	11"	11"	6"		
66	12"	12"	10"	12"	12"	7"	8"	8"	3"	12"	12"	10"	12"	12"	7"	8"	8"	3"		
96	12"	12"	8"	10"	10"	8"	8"	8"	3"	12"	12"	8"	10"	10"	8"	8"	8"	3"		
128	11"	11"	6"	10"	10"	8"	8"	8"	3"	12"	12"	6"	10"	10"	8"	8"	8"	3"		
1/2" - ITW REDHEAD MULTI-SET II W/ 1-5/8" EMBED (MIN 3000psi CONC)	38	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"		
	47	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"		
66	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"		
96	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"		
128	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"		
3/8-16 DEWALT CALK-IN W/ 1 1/4" EMBED (MIN 3000psi CONC)	38	12"	12"	12"	12"	12"	10"	12"	12"	7"	12"	12"	12"	12"	12"	12"	9"			
	47	12"	12"	12"	12"	12"	8"	9"	9"	5"	12"	12"	12"	12"	11"	12"	12"	7"		
66	12"	12"	9"	10"	10"	6"	7"	7"	4"	12"	12"	11"	12"	12"	7"	12"	12"	5"		
96	12"	12"	7"	8"	8"	4"	7"	7"	4"	12"	12"	9"	12"	12"	5"	12"	12"	5"		
128	9"	9"	5"	8"	8"	4"	7"	7"	4"	12"	12"	7"	12"	12"	5"	12"	12"	5"		
1/2" - PANELMATE L INSERT W/ 1-1/4" EMBED & 3-1/2" MIN E.D. (MIN 2700psi CONC)	38	12"	12"	12"	12"	12"	9"	12"	12"	6"	12"	12"	12"	12"	12"	12"	12"	6"		
	47	12"	12"	11"	12"	12"	8"	12"	12"	3"	12"	12"	12"	12"	12"	12"	12"	6"		
66	12"	12"	8"	12"	12"	9"	9"	9"	3"	12"	12"	12"	12"	12"	12"	12"	12"	6"		
96	12"	12"	6"	10"	10"	9"	9"	9"	3"	12"	12"	12"	12"	12"	12"	12"	12"	6"		
128	12"	12"	12"	10"	10"	9"	9"	9"	3"	12"	12"	12"	12"	12"	12"	12"	12"	6"		

FRANK BENNARDO, P.E.  
PE# 96064 CA# F-11383



**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
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**WAYNE-DALTON**  
A DIVISION OF OVERHEAD DOOR CORP.  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
FABRIC-SHIELD™ WIDE-WELD FABRIC STORM PANELS  
IBC 2018 EDITION & IRC 2018 EDITION  
TEXAS DEPARTMENT OF INSURANCE (TDI)



# ANCHOR SCHEDULE 4

HOST STRUCT.	ANCHOR	LOAD (psf)	2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
HOLLOW BLOCK	1/4" ULTRACON (DEWALT) WITH 1-1/4" EMBED	38	12"	12"	9"	9"	6"	6"			
		47	11"	11"	7"	7"					
		66	8"	8"							
		96	6"	6"							
	1/4" TAPCON (ITW) WITH 1-1/4" EMBED	38	10"	10"	4"	7"	7"	3"	5"	5"	
		47	8"	8"	4"	5"	5"		4"	4"	
		66	6"	6"	3"	4"	4"		3"	3"	
		96	5"	5"	3"	3"	3"		3"	3"	
	1/4" DEWALT PANELMATE (MALE OR FEMALE) WITH MIN 1-1/4" EMBEDMENT	38	12"	12"	7"	9"	9"	5"	6"	6"	3"
		47	11"	11"	6"	7"	7"	4"	5"	5"	3"
		66	8"	8"	4"	5"	5"	3"	3"	3"	
		96	6"	6"	3"	4"	4"		3"	3"	
1/4" ITW TAPCON SG OR SAMMY SUPER SCREW W/ MIN 1 1/4" EMBEDMENT	38	12"	12"	9"	8"	8"	6"	5"	5"	4"	
	47	10"	10"	7"	7"	7"	5"	4"	4"	3"	
	66	7"	7"	5"	5"	5"	3"	3"	3"		
	96	6"	6"	4"	4"	4"		3"	3"		
1/4-20 ALL POINTS SOLID-SET ANCHOR WITH MIN 7/8" EMBEDMENT	38	12"	12"	9"	9"	9"	6"	6"	6"	4"	
	47	11"	11"	8"	8"	8"	5"	5"	5"	3"	
	66	8"	8"	5"	5"	5"	4"	4"	4"		
	96	7"	7"	4"	4"	4"		4"	4"		
5/16" ULTRACON (DEWALT) WITH MIN 1 1/4" EMBED	38										
	47										
	66										
	96										
3/8" RED HEAD LDT W/ MIN 1 1/2" EMBEDMENT	38										
	47										
	66										
	96										

2-1/2" MIN EDGE DISTANCE								
Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
C1	C2	C3	C1	C2	C3	C1	C2	C3
10"	10"	5"	7"	7"	3"	4"	4"	
8"	8"	4"	5"	5"	3"	4"	4"	
6"	6"	3"	4"	4"		3"	3"	
5"	5"		3"	3"		3"	3"	
4"	4"		3"	3"		3"	3"	
12"	12"	5"	8"	8"	3"	5"	5"	
10"	10"	4"	6"	6"		4"	4"	
7"	7"	3"	5"	5"		3"	3"	
5"	5"		4"	4"		3"	3"	
4"	4"		4"	4"		3"	3"	
12"	12"	7"	9"	9"	5"	6"	6"	3"
11"	11"	6"	7"	7"	4"	5"	5"	3"
8"	8"	4"	5"	5"	3"	4"	4"	
6"	6"	3"	4"	4"		4"	4"	
5"	5"	3"	4"	4"		4"	4"	
12"	12"	10"	10"	10"	6"	7"	7"	4"
12"	12"	8"	8"	8"	5"	5"	5"	3"
9"	9"	5"	6"	6"	4"	4"	4"	
7"	7"	4"	5"	5"		4"	4"	
5"	5"	3"	5"	5"		4"	4"	
12"	12"	10"	12"	12"	7"	8"	8"	5"
12"	12"	8"	10"	10"	6"	6"	6"	4"
10"	10"	6"	7"	7"	4"	5"	5"	
9"	9"	4"	6"	6"	3"	5"	5"	
7"	7"	4"	6"	6"	3"	5"	5"	
9"	9"		6"	6"				
7"	7"							
12"	12"	7"	12"	12"		9"	9"	
12"	12"		11"	11"		7"	7"	
12"	12"		8"	8"				
9"	9"		6"	6"				
8"	8"		6"	6"				

HOST STRUCT.	ANCHOR	LOAD (psf)	1" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
HOLLOW BLOCK	1/4" - DEWALT CRETE-FLEX W/ 1-5/8" EMBED	38	8"	8"	8"						
		47	7"	7"	6"						
		66									
		96									
128											

HOST STRUCT.	ANCHOR	LOAD (psf)	3 1/2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
HOLLOW BLOCK	5/16" ULTRACON (DEWALT) WITH MIN 1 1/4" EMBED	38	12"	12"	8"	12"	12"		8"	8"	
		47	12"	12"	6"	10"	10"		6"	6"	
		66	10"	10"		7"	7"				
		96	8"	8"		6"	6"				
HOLLOW BLOCK	3/8" RED HEAD LDT W/ MIN 1 1/2" EMBEDMENT	38	12"	12"	7"	12"	12"		10"	10"	
		47	12"	12"		12"	12"		8"	8"	
		66	12"	12"		9"	9"		6"	6"	
		96	10"	10"		7"	7"		6"	6"	
HOLLOW BLOCK	1/2" - PANELMATE L INSERT W/ 1-1/4" EMBED & 3-1/2" MIN E.D. (MIN 1794psi HB)	38	12"	12"	12"	12"	12"	9"	12"	12"	6"
		47	12"	12"	11"	12"	12"	8"	12"	12"	
		66	12"	12"	8"	12"	12"		9"	9"	
		96	12"	12"	6"	10"	10"		9"	9"	
128	12"	12"		10"	10"		9"	9"			

FRANK BENNARDO, P.E.  
PE# 96064 CA# F-11383

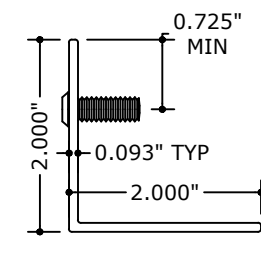


# ANCHOR SCHEDULE 5

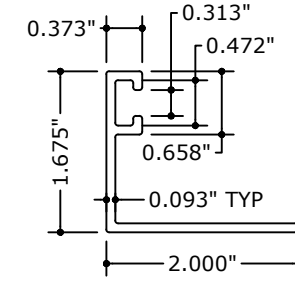
HOST STRUCT.	ANCHOR	LOAD (psf)	1/2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
18GA STEEL	#14 SAE GR 5 SMS TO MINIMUM 18GA (0.0478") STEEL STUDS (MIN Fu = 50 KSI)	38	12"	12"	6"	12"	12"	4"	9"	9"	3"
		47	12"	12"	5"	11"	11"	3"	7"	7"	
		66	12"	12"	3"	8"	8"		5"	5"	
		96	9"	9"	3"	6"	6"		5"	5"	
128	8"	8"		6"	6"		5"	5"			

# ANCHOR SCHEDULE 6

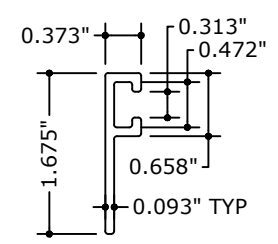
HOST STRUCT.	ANCHOR	LOAD (psf)	1/2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
ALUMINUM	#14 SAE GR 5 SMS TO 6063-T6 ALUMINUM (1/8" MIN)	38	12"	12"	11"	12"	12"	7"	12"	12"	5"
		47	12"	12"	9"	12"	12"	6"	12"	12"	4"
		66	12"	12"	6"	12"	12"	4"	9"	9"	3"
		96	12"	12"	5"	10"	10"	3"	9"	9"	3"
128	12"	12"	4"	10"	10"	3"	9"	9"	3"		



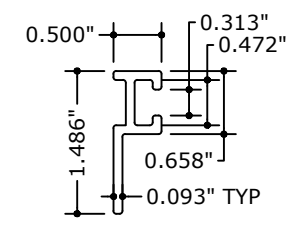
1 STUDDED ANGLE  
4 6" = 1'-0"



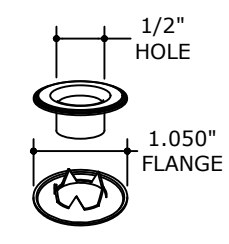
2 "F" ANGLE  
4 6" = 1'-0"



3 "F" TRACK  
4 6" = 1'-0"



4 "BF" TRACK  
4 6" = 1'-0"



5 #4 GROMMET  
4 6" = 1'-0" ISOMETRIC

**ENGINEERING EXPRESS**  
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**WAYNE-DALTON**  
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TEXAS DEPARTMENT OF INSURANCE (TDI)



DATE	DRWN	CHKD	DATE
12/10/09	KL	FLB	12/10/09
	KL	FLB	12/10/09
	EPR	RWN	05/05/22

22-51543

SCALE: NTS UNLESS NOTED

c:\users\eric\engineering\express\production - documents\projects\22-51543 fabric-shield wide-weld fabric storm panels, impact resistant - shu 140\work\drawings & cad\1 tdi-22-51543f.dwg.dwg